BIOGRAPHICAL SKETCH **SEPTEMBER 2004**

NAME	POSITION TITLE
Lothar Hennighausen, Ph.D.	Laboratory Chief, NIDDK, NIH

INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
University of Marburg, Germany	BS	1977	Biology
University of Köln, Germany	Diploma	1979	Biology
University of Köln, Germany	Doctorate	1982	Genetics
Harvard Medical School	Postdoctoral	1983 - 1985	Genetics

Employment

1985 – 1991	National Institute of Diabetes and Digestive and Kidney Diseases Principal Investigator and Group Leader
1992 – 1993	Max-Planck-Institute for Biophysical Chemistry, Göttingen, Germany Visiting Scientist and Humboldt Fellow
1991 – 1997	National Institute of Diabetes and Digestive and Kidney Diseases Chief, Developmental Biology Section
2002 – 2003	Max-Planck-Institute for Biochemistry, Martinsried - München, Germany Humboldt Scholar and Visiting Professor
1997 – present	National Institute of Diabetes and Digestive and Kidney Diseases National Institutes of Health, Bethesda, Maryland Senior Biomedical Research Service Chief, Laboratory of Genetics and Physiology

Prizes, Fellowships and Honored Lecture Invitations

- Equal Employment Opportunity Special Achievement Award, National Institutes of Health (2004)
- Olof Pearson Memorial Lecture, Case Western Reserve University (2003)
- Presidential Lecture, Society for the Study of Reproduction (2002)
- Alexander-von-Humboldt Research Award (2001)
- Keynote Address, Mouse Models for Prostate Cancer, The Jackson Laboratory (2001)
- Keynote Address, American Society for Urology, Houston (2000)
- Keynote Address, Molecular and Cell Biology Program, Ohio University (1999)
- Keynote Address, Massachusetts Breast Cancer Coalition, Boston University School of Medicine (1996)
- Keynote Address, Graduate Students Retreat, Texas A&M (1996)
- Fellowships from EMBO, Studienstiftung des Deutschen Volkes, Deutsche Forschungsgemeinschaft, and the Alexander-von-Humboldt Foundation
- Honors Program in Molecular Biology, University of Edinburgh (Scotland) (foreign study: 1977-1978)

Professional Experience and Service

- Organizer of conferences and workshops at the NIH and the Jackson Laboratory
- Member, Mouse Model Consortium for Human Cancer
- Teaching at Harvard Medical School, Einstein College of Medicine and the Marine Biology Center at Woods Hole
- Editorial Board (past and present) of ‘Molecular Endocrinology’, 'Endocrinology', ‘Cell Growth and Differentiation’, Molecular Biology Reports', ‘Transgenic Research’. “Oncogene’ and 'Breast Cancer Research'
- Review Panels at the NCI, NIDDK, the DOD Breast Cancer Initiative and the NCI of Canada

Dr. Hennighausen has trained more than 40 scientists. Former laboratory members hold/held faculty positions at the Universities of Nebraska, Missouri, Utah, UCLA, Edinburgh (Great Britain), Regensburg and Munich (Germany), Madrid (Spain), Tokushima and Osaka (Japan), Kwangju (Korea), the Scripps Institute and work in Government Research Institutes in France and Israel and for the NCI. Others have joined Biotech firms, including, GeneLogic, Human Genome Sciences, Boehringer Ingelheim, Genoway and the American Red Cross. Some members joined investment and consulting firms. Former technicians are now in Medical School, Graduate School and MD/PhD programs. Hennighausen is an avid cyclist and rides centuries (100 miles) in charity races with Lance Armstrong and Tyler Hamilton.

Publications (17 selected out of more than 180)

- Cui, Y., Riedlinger, G., Miyoshi, K., Tang, W., Li, C., Deng, C.X., Robinson, G.W. and **Hennighausen**, L. (2004) Inactivation of Stat5 in mouse mammary epithelium during pregnancy reveals distinct functions in cell proliferation, survival and differentiation. Mol. Cell. Biol., 24, 8037-8047.
- Bry, C., Maass, K., Miyoshi, K., Willecke, K., Ott, T., Robinson, G.W. and **Hennighausen**, L. (2004) Loss of connexin 26 in mammary epithelium during early but not during late pregnancy results in unscheduled apoptosis and impaired development. Dev. Biol., 267, 418-429.
- Shillingford, J.M., Miyoshi, K., Robinson, G.W., Grimm, S.L., Rosen, J.M., Neubauer, H., Pfeffer, K. and **Hennighausen**, L. (2002) Jak2 is an essential tyrosine kinase involved in pregnancy-mediated development of mammary secretory epithelium. Mol. Endo. 16, 563-570.
- Miyoshi, K., Shillingford, J.M., Smith, G.H., Grimm, S.L., Wagner, K.U., Oka, T., Rosen, J.M., Robinson, G.W. and **Hennighausen**, L. (2001) Signal transducer and activator of transcription 5 (Stat5) controls the specification and proliferation of mammary alveolar epithelium, J. Cell Biol., 155, 531-542.
- **Hennighausen**, L. and Robinson, G.W. (2001) Signaling pathways in the mammary gland. Developmental Cell, 1, 467-475.
- Gallego, M. I., Binart, N., Robinson, G.W., Okagaki, R., Coschigano, K., Perry, J., Kopchick, J., Oka, T., Kelly, P.A. and **Hennighausen**, L. (2001) Prolactin, growth hormone and epidermal growth factor activate Stat5 in different cell types of the mammary gland and exert overlapping but distinct developmental effects. Developmental Biology, 229, 163-175.
- Wagner K-U., Estefania C., Rucker, E., Riedlinger, G, Broussard, C., Schwartzberg, P.L., Siebenlist, U., **Hennighausen**, L. (2000) Conditional deletion of the bcl-x gene from erythroid cells results in hemolytic anemia and profound splenomegaly. Development, 127, 4949-4958.
- Rucker, E., Dierisseau, P., Wagner, K.-U., Garrett, L., Wynshaw-Boris, A., Flaws, J. and **Hennighausen**, L., (2000). Bcl-x and Bax regulate mouse primordial germ cell survival and apoptosis during embryogenesis. Mol. Endo. 7, 1038-1052.
- Wagner, K.-U., Wall, R.J., St-Onge, L., Gruss, P., Garrett, L., Wynshaw-Boris, A., Li, M., Furth, P.A. and **Hennighausen**, L. (1997) Cre mediated gene deletion in the mammary gland. Nucleic Acids. Res. 25, 4323-4330.
- Liu, X., Robinson, G.W., Wagner, K.-U., Garrett, L., Wynshaw-Boris, A. and **Hennighausen**, L. (1997) Stat5a is mandatory for adult mammary gland development and lactogenesis. Genes and Dev. 11, 179-186.
- Ewald, D., Li, M., Efrat, S., Auer, G., Wall, R.J., Furth, P.A. and **Hennighausen**, L. (1996) Time-sensitive reversal of hyperplasia in transgenic mice expressing SV40 T antigen. Science 273, 1384-1386.
- Robinson, G.W., McKnight, R.A., Smith, G.H. and **Hennighausen**, L. (1995) Mammary epithelial cells undergo differentiation in cycling virgins but require pregnancy for the establishment of terminal differentiation. Development 121, 2079-2090.
- Furth, P.A., St. Onge, L., Boger, H., Gruss, P., Gossen, M., Kistner, A., Bujard, H. and **Hennighausen**, L. (1994) Temporal control of gene expression in transgenic mice by a tetracycline responsive promoter. Proc. Natl. Acad. Sci. U.S.A. 91, 9302-9306.
- Burdon, T., Sankaran, L., Wall, R.J., Spencer, M., and **Hennighausen**, L. (1991) Expression of a whey acidic protein transgene during mammary development: Evidence for different mechanisms of regulation during pregnancy and lactation. J. Biol. Chem. 266, 6909-6914.
- Gordon, K., Lee, E., Vitale, J.A., Smith, A.E., Westphal, H. and **Hennighausen**, L. (1987) Production of human tissue plasminogen activator in transgenic mouse milk. BIO/TECHNOLOGY 5, 1183-1187.
- **Hennighausen**, L., Siebenlist, U., Danner, D., Leder, P., Rawlins, D., Rosenfeld, P. and Kelly, T. (1985) High affinity binding site for a specific nuclear protein in the human IgM gene. Nature 314, 289-292.
- **Hennighausen**, L.G. and Sippel, A.E. (1982) Characterization and cloning of the mRNAs specific for the lactating mouse mammary gland. Eur. J. Biochem. 125, 131-141.

Patents

US #6,361,991	Targeting gene expression to living tissue using jet injection
US #6,262,336	Expression of a heterologous protein C in mammary tissue of transgenic animals using the long whey acidic protein gene promoter mammals proteins in milk of transgenic animals
US #5,998,382	Transfer of genes into tissue using jet injection
US # 5,831,141	Expression of a heterogeneous polypeptide in mammary tissue of mammals proteins in milk of transgenic animals
EP #0264166B1	Production of foreign proteins in milk of transgenic animals